# The other pipeline: Securing the future of emergency medicine in Canada

Glen Bandiera, BASc, MD, MEd[*]; Samuel Vaillancourt, CM, MD, MPH[*†]

The future of emergency medicine in Canada is dependent on integrated and aligned pathways into the discipline that are responsive to evolving societal needs. Put simply, we need to graduate physicians not only for today, but also for the future. Specifically, the role of the physician itself is evolving, with emphasis shifting towards knowledge application, use of real-world practice data for the greater good, and the ability to influence system change. Two articles in this issue of *CJEM* explore different phases in the journey for the next generation of emergency physicians in Canada. They independently exemplify a strong adherence to current directions and obligations within our system while, together, they conjure an image of how coherent admissions and training designs can align to serve societal needs well into the future.

Paterson et al., in "A Transparent and Defensible Process for Applicant Selection Within a Canadian Emergency Medicine Residency Program," outline a systematic approach to the selection of applicants into a specialty emergency medicine program.[1] They report drawing heavily on a referenced paper outlining best practices for application and selection endorsed by the Association of Faculties of Medicine of Canada (AFMC) to create a process that is "rigorous" and "defensible." The authors, in designing their process as they have and disseminating it so widely through their publication in *CJEM*, have done a great and further service to the advancement of admissions practices. They have taken a huge jump in publicly describing in great detail what they are looking for and how they will assess applicants against their predetermined criteria. They are to be lauded for this.

One of the strongest sources of concern for program directors has been the fear that revealing their secrets will lead to further "gaming" of the system and "prepping for the process" rather than legitimate preparation for an emergency medicine career. The AFMC *Future of Medical Education in Canada – PG* report called for the need for greater transparency of selection processes.[2] Programs must decide what they are trying to accomplish and how their selection activities align with this. They then need to clearly and publicly state these things so that potential applicants can decide whether and how their experiences and aspirations "fit" with the program. While this may create the opportunity for applicants to "tell the program what it wants to hear," no applicant can manufacture a lifetime of past experiences between the time that a program description goes "live" and the application/interview day; nor can they suddenly develop the ability, upon reviewing detailed program descriptions, to be self-reflective and compellingly describe how their trajectory thus far has made them a better person and a better prospect for a given program. Better to have candidates know exactly what is sought by a program rather than expend effort and suffer great anxiety pursuing admission guided at best by a vacuum and at worst by myths and misperceptions. Only by clearly articulating program priorities, aligning admissions processes to focus on key applicant attributes, educating assessors about their role and bias mitigation techniques, and basing final ranking decisions on data-driven consensus can programs optimize their outcome.

Whether a more rigorous admission process can lead to improved outcomes is the remaining question that the Paterson paper does not address. The mere act of stating desired characteristics – teamwork, dedication to a task, scholarship, leadership, and social responsibility – is likely to shape the participants' preparation. It also sets up their expectations as to how they may

From the [*]University of Toronto, Unity Health Toronto, Toronto, ON; and the [†]Li Ka Shing Knowledge Institute, Toronto, ON.

**Correspondence to:** Dr. Samuel Vaillancourt, Department of Emergency Medicine, Unity Health Toronto, St. Michael's Hospital, 30 Bond Street, Toronto, Canada, M5B 1W8.


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get opportunities to apply and grow these valued skills over the course of their residency.

The second paper, by Trivedi et al., "Residents' Perspective of Quality Improvement and Patient Safety Education in Canadian Emergency Medicine Residency Programs," speaks to some of these expectations.[3] In uniquely pertinent ways, the field of quality improvement and patient safety (QIPS) is a perfect match for the desired skills described in the paper by Paterson et al., and Trivedi et al. make evident how opportunities for learning and mastering QIPS during residency fall short of expectations.

The need for QIPS proficiency in modern healthcare is no longer controversial.[4] Rising resource use in healthcare provision, rapidly expanding complexity and sprawling treatment teams often allow patients health benefits that would have been elusive even a decade ago, but also pose real threats of chaos, iatrogenic harm, and overwhelmed clinicians.[5] Societal expectations of physicians are decidedly shifting away from the memorization of knowledge towards its organization and implementation. In an emergency department, how likely a patient is to be exposed to radiation in the investigation of a possible pulmonary embolism, or how quickly a patient with a transient ischemic attack gets assessment and treatment depends at least as much on the clinical microsystem as it does on the physicians' medical knowledge. Improving patient outcomes in such a context requires proficiency in diagnosing and treating system problems, which is central to QIPS.

Despite this widespread recognition, Trivedi's paper points to significant lags in training opportunities. Theoretical teaching of QIPS is critical and often still lacking in many residency programs, as uncovered by Trivedi. However, just as medicine cannot be learned solely from a textbook, opportunities for QIPS practice are absolutely necessary, and yet lacking according to over half of respondents. This is not entirely surprising, as QIPS is still an emerging field. Deep experience among faculty is rapidly expanding but still no match for other academic areas of focus, such as medical education or clinical research. Most hospitals are not particularly well set up to produce and track data essential to QIPS activities, and academic paths have only recently started to be developed for QIPS practitioners. Trivedi's paper gives us a snapshot from the perspective of residents of a growing academic field in emergency medicine in Canada, showing us how far we've come and how far we have yet to go to ensure that we equip our trainees to fulfil the promise they hold for the healthcare system and our patients.

We may get by with luck alone. Much has been written about the millennial mindset and the associated propensity towards sharing, strong data literacy, and desire to take on leadership roles within a more shared leadership system. We believe, however, that improved selection and training play crucial roles in ensuring that a diverse and capable group of individuals equipped with the right skills will take emergency medicine to the next level of leadership. The real proof will be when the "product" reaches the end of the pipeline – will there be a healthcare system ready to be led and improved by this new generation?

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